

ABSTRACT

A printhead for an ink jet printer with an array 14 of ink ejection nozzles 22 formed from MEMS techniques. To protect the delicate nozzle structures, a nozzle guard 80 covers the exterior surface of the array 14. A corresponding array of apertures 84 is formed in the guard 80. To attach the guard 80 to the silicon substrate 16 carrying the nozzles 22, alignment formations 148 configured for engagement with complementary formations on a nozzle guard 86. For precise registration between the nozzles 22 and the respective apertures 86 in the guard 80, the alignment formations 148 may be formed using the same etching and deposition techniques used to form the nozzles 22. To protect the fragile nozzle structures 22 from inadvertent contact with the struts 86 during assembly, the nozzles 22 are reinforced by sacrificial material 152 which subsequently removed by an oxygen plasma etch 154.